

Claims

This listing of claims replaces all previous versions, and listings, of claims in the present application:

38. 1-38. (canceled)

39. (new) A method of crediting a mobile radio apparatus account using:

- a mobile radio apparatus having a radio communication circuit and a display capable of displaying an image including a graphical representation of data;

- a retail system having a reader capable of reading graphically represented data displayed on said display of said mobile radio apparatus; and

- a transaction control system remote from said retail system, said retail system and said transaction control system being capable of communicating over a communications link, said transaction control system storing account database records of mobile radio apparatus accounts, each of said account database records including an amount of credit, the method comprising the steps of:

- displaying on said display of said mobile radio apparatus an image including a graphical representation of transaction data which includes data corresponding to at least one of said account database records;

- using said reader of said retail system to read said graphically represented transaction data displayed on said display of said mobile radio apparatus;

- using said retail system to accept payment in a payment amount;

- communicating from said retail system to said transaction control system, the read

data corresponding to said at least one of said account database records and data indicating that payment has been accepted; and

updating said account database record corresponding to the communicated data to credit said mobile radio apparatus account by said payment amount.

40. (new) A method according to claim 39, wherein

said transaction control system further stores transaction database records of desired transactions for respective mobile radio apparatus accounts, and

said data corresponding to said at least one of said account database records included in said transaction data is data which identifies a transaction database record.

41. (new) A method according to claim 40, wherein

said account database records and said transaction database records are stored in an account database and a transaction database, respectively, which databases are separate from each other, each of said transaction database records including data identifying an account database record in the account database,

said step of updating said account database record comprises:

extracting, from said transaction database record identified by said communicated data, data identifying an account database record in said account database; and

updating said account database record in the account database identified by said data extracted from the transaction database to credit said mobile radio apparatus account by said payment amount.

42. (new) A payment system for crediting a mobile radio apparatus account comprising:
- a transaction control system storing account database records of mobile radio apparatus accounts, each of said account database records including an amount of credit;
 - and
 - a mobile radio apparatus having a radio communication circuit and a display capable of displaying an image including a graphical representation of transaction data which includes data corresponding to an account database record;
 - a retail system remote from said transaction control system; and
 - a communications link between said retail system and said transaction control system,
- said retail system comprising:
- a reader capable of reading graphically represented transaction data displayed on said display of said mobile radio apparatus;
 - payment means for accepting a payment in an amount; and
 - means for communicating the read data corresponding to an account database record and data indicating that payment has been accepted over said communications link to said transaction control system;
- said transaction control system further comprising account update means for updating the account database record corresponding to the communicated data to credit said mobile radio apparatus account by said payment amount.
43. (new) A payment system according to claim 42, wherein
- said transaction control system further stores transaction database records of

desired transactions for respective mobile radio apparatus accounts, and

said data corresponding to an account database record included in said transaction data is data which identifies a transaction database record.

44. (new) A payment system according to claim 43, wherein said transaction control system further comprises transaction update means, responsive to the data communicated from said retail system, for updating the transaction database record identified by the communicated data to indicate that payment has been accepted.

45. (new) A payment system according to claim 43, wherein

said transaction control system stores said account database records and said transaction database records in an account database and a transaction database, respectively, which databases are separate from each other, each transaction database record including data identifying an account database record in said account database,

said transaction control system further comprises extraction means for extracting, from the transaction database record identified by the communicated data, the data identifying an account database record in said account database, and

said account update means is arranged to update, in said account database, the account database record identified by the data extracted from said transaction database.

46. (new) A payment system according to claim 45, wherein said transaction control system includes:

an account server including said account database and said account update means;

a transaction server including said transaction database and said extraction means;
and

a communications link between said transaction server and said account server.

47. (new) A payment system according to claim 43, wherein

said transaction control system includes authorisation means, responsive to the data identifying a transaction database record communicated from said retail system, for checking the transaction database record identified by the communicated data and communicating an authorisation to said retail system if a predetermined criterion is met, and

the payment means is arranged to inhibit acceptance of said payment until receipt of said authorisation by said retail system.

48. (new) A payment system according to claim 43, wherein

each transaction database record includes said payment amount,
said transaction control system includes retrieval means, responsive to the data identifying a transaction database record communicated from said retail system, for retrieving said payment amount from the transaction database record identified by the communicated data and communicating the retrieved payment amount to said retail system, and

said payment means is arranged to accept said payment of the payment amount communicated from said transaction control system.

49. (new) A payment system according to claim 42, wherein
said transaction data further includes the payment amount and said payment means is arranged to accept the payment of the payment amount read as part of the transaction data.
50. (new) A payment system according to claim 42, wherein
the image is a message received by said mobile radio apparatus, and
the transaction control system includes messaging means including transmission means for transmitting a message comprising an image including a graphical representation of transaction data which includes data corresponding to an account database record.
51. (new) A payment system according to claim 50, wherein
said transaction control system further stores transaction database records of desired transactions for respective mobile radio apparatus accounts,
said data corresponding to an account database record included in said transaction data is data which identifies a transaction database record,
said messaging means further includes reception means for receiving a request message from said mobile radio apparatus indicative of the desire to credit the mobile radio apparatus account of said mobile radio apparatus,
the transaction control system further includes transaction database record creation means, responsive to the receipt of a message by said reception means, for creating a transaction database record including the data identifying the account of said

mobile radio apparatus from which a message is received, and

said transmission means is responsive to the creation of a transaction database record by said transaction database record creation means for transmitting a message comprising an image including a graphical representation of transaction data which includes data identifying the created transaction database record.

52. (new) A payment system according to claim 50, wherein the transaction control system includes:

a transaction server including said transaction database and said transaction update means;

a messaging server constituting said messaging means; and

a communications link between said transaction server, and said messaging server.

53. (new) A payment system according to claim 42, wherein said data corresponding to an account database record, included in said transaction data, consists of a randomly generated number.

54. (new) A payment system according to claim 42, wherein said graphical representation is a two-dimensional matrix barcode.

55. (new) A retail system for use in a payment system for crediting a mobile radio apparatus account, said payment system having a transaction control system storing account database

records of mobile radio apparatus accounts, each account database record including an amount of credit, the retail system comprising;

a reader capable of reading graphically represented transaction data including data corresponding to an account database record displayed on a display of a mobile radio apparatus;

payment means for accepting a payment in an amount; and

means for communicating the read data and data indicating that payment has been accepted over a communications link to said transaction control system.

56. (new) A retail system according to claim 55, wherein said payment means is arranged to accept the payment of a payment amount read as part of said transaction data.

57. (new) A retail system according to claim 55, wherein said payment means is arranged to inhibit acceptance of said payment until receipt of an authorisation by said retail system.

58. (new) A transaction control system for use in a payment system for crediting a mobile radio apparatus account, comprising:

an account database storing at least one account database record corresponding to a mobile radio apparatus account, said account database record including an amount of credit;

a transaction database storing at least one transaction database record corresponding to a mobile radio apparatus account, said transaction database record including at least one desired transaction;

means for receiving a communication to credit said mobile radio apparatus account by a payment amount, said communication identifying a transaction database record;

account update means for updating said at least one account database record corresponding to said transaction database record identified by said communication to credit the mobile radio apparatus account by the payment amount.

59. (new) A transaction control system according to claim 58, further comprising transaction update means, responsive to the data communicated from a retail system, for updating said at least one transaction database record identified by the retail system communicated data to indicate that payment has been accepted.

60. (new) A transaction control system according to claim 58, wherein said account database and said transaction database are separately maintained, wherein each of said at least one transaction database records includes data identifying an account database record in the account database, and wherein the transaction control system further comprises:

extraction means for extracting, from said transaction database record identified by said communication, the data identifying an account database record in the account database, said account update means updating, in said account database, said account database record identified by the data extracted from said transaction database record.

61. (new) A transaction control system according to claim 58, wherein each transaction database record includes the payment amount, and further comprising retrieval means,

responsive to the data identifying a transaction database record communicated from a retail system, for retrieving the payment amount from the transaction database record identified by the communicated data and communicating the retrieved payment amount to said retail system.

62. (new) A transaction control system according to claim 58, further including authorisation means, responsive to the data identifying a transaction database record communicated from a retail system, for checking the transaction database record identified by the communicated data and communicating an authorisation to the retail system if a predetermined criterion is met.

63. (new) A transaction control system according to claim 58, further including messaging means having transmission means for transmitting a message comprising an image including a graphical representation of transaction data which includes data identifying a transaction database record.

64. (new) A transaction control system according to claim 63, wherein

said messaging means further includes reception means for receiving a request message from a mobile radio apparatus indicative of the desire to credit a mobile radio apparatus account of said mobile radio apparatus,

said transaction control system further includes transaction database record creation means, responsive to the receipt of a message by said reception means, for creating a transaction database record including data identifying the account of the mobile radio apparatus from which a message is received, and

said transmission means is responsive to the creation of a transaction database

record by said transaction database record creation means for transmitting a message comprising an image including a graphical representation of transaction data which includes data identifying the created transaction database record.

65. (new) A transaction control system according to claim 63, wherein the transaction control system includes:

- a transaction server including said transaction database and said transaction update means;

- a messaging server constituting said messaging means; and

- a communications link between said transaction server and said messaging server.

66. (new) A transaction server for use in a payment system, comprising

- a transaction database of transaction database records of desired transactions, each transaction database record including data identifying an account database record of a mobile radio apparatus account in an account database stored on an account server,

- transaction update means, responsive to data identifying a transaction database record communicated from a retail system, for updating the transaction database record identified by the communicated data to indicate that a payment has been accepted in a payment amount;

- means for extracting from the transaction database record identified by the communicated transaction data, the data identifying an account database record in the account database; and

- means for communicating the extracted data and the payment amount to the

account server.

67. (new) A transaction server according to claim 66, wherein
- each transaction database record includes the payment amount, and
 - the transaction server includes retrieval means, responsive to the data identifying a transaction database record communicated from said retail system, for retrieving said payment amount from the transaction database record identified by the communicated data and communicating the retrieved payment amount to said retail system.
68. (new) A transaction server according to claim 66, including authorisation means, responsive to the data identifying a transaction database record communicated from said retail system, for checking the transaction database record identified by the communicated data and communicating an authorisation to said retail system if a predetermined criterion is met.
69. (new) A method of payment for a product using:
- a mobile radio apparatus having a radio communication circuit and a display capable of displaying an image including a graphical representation of data;
 - a retail system having a reader capable of reading graphically represented data displayed on said display of said mobile radio apparatus; and
 - a transaction control system remote from said retail system, said retail system and said transaction control system being capable of communicating over a communications link, said transaction control system storing transaction database records of desired transactions each including data identifying a desired product,

the method comprising the steps of:

displaying on said display of said mobile radio apparatus an image including a graphical representation of transaction data which includes data identifying a transaction database record;

using said reader of said retail system to read the graphically represented transaction data displayed on said display of said mobile radio apparatus;

using said retail system to accept a payment;

communicating from said retail system to said transaction control system, the read data identifying a transaction database record and data indicating that payment has been accepted;

updating the transaction database record identified by the communicated data to indicate that payment has been accepted; and

delivering the product identified in the identified transaction database record.

70. (new) A payment system comprising:

a transaction control system storing transaction database records of desired transactions each including data identifying a desired product;

a mobile radio apparatus having a radio communication circuit and a display capable of displaying an image including a graphical representation of transaction data which includes data identifying a transaction database record;

a retail system remote from said transaction control system; and

a communications link between said retail system and said transaction control system,

said retail system comprising:

a reader capable of reading graphically represented transaction data displayed on said display of said mobile radio apparatus;

payment means for accepting a payment; and

means for communicating the read data identifying a transaction database record and data indicating that payment has been accepted over the communications link to said transaction control system;

said transaction control system further comprising means, responsive to the data communicated from said retail system, for updating the transaction database record identified by the communicated data to indicate that payment has been accepted.